

Customer No.: 31561
Application No.: 10/065,750
Docket No.: 8711-US-PA

REMARKS

I. Present Status of the Application

The Office Action rejected, under 35 U.S.C. § 103(a), claims 1-6 and 9-11 as being unpatentable over Kluth et al. (US 6,376,341) in view of Wolf et al. (Silicon Processing), and claims 8 and 12 as being unpatentable over Kluth et al. in view of Wolf et al. and further in view of Randolph et al. (US 6,538,270). The Office Action acknowledged that claims 13-21 are allowed.

No amendments are made to the application. Claims 1-6 and 8-21 remain pending in the present application with claims 1 and 13 being independent claims. Reconsideration of those claims is respectfully requested.

II. Response to Rejections

A. Rejections under 35 U.S.C. § 103(a)

The Office Action rejected, under 35 U.S.C. § 103(a), claims 1-6 and 9-11 as being unpatentable over Kluth et al. (US 6,376,341) in view of Wolf et al. (Silicon Processing), and claims 8 and 12 as being unpatentable over Kluth et al. in view of Wolf et al. and further in view of Randolph et al. (US 6,538,270). Applicants respectfully traverse the rejection for at least the reasons set forth below.

Customer No.: 31561
Application No.: 10/065,750
Docket No.: 8711-US-PA

To establish prima facie obviousness of a claimed invention, all the claim limitation must be taught or suggested by the prior art. M.P.E.P. § 2143. In determining the differences between the prior art and the claimed invention, the question under 35 U.S.C. § 103 is not whether the differences themselves would have been obvious, but whether the claimed invention as a whole would have been obvious. M.P.E.P. § 2141.

The claimed invention provides a method for fabricating a nitride read-only memory to prevent over-etching of the top oxide layer of the ONO stacked layer. For doing so, a protective layer is formed on the ONO stacked layer to protect the top oxide layer such that corner loss of the top oxide layer can be reduced and the electrical properties of the device are not deteriorated.

The independent claim 1 recites, inter alia, that "an etching rate of the protective layer is lower than an etching rate of the top oxide layer," and "a thickness of the protective layer is smaller than 50Å."

Kluth et al., however, is directed to forming a "masking layer 36" on an ONO layer "to withstand the doping of semiconductor substrate 22 with both n-type and p-type dopants and withstand a thermal cycle" (column 5, lines 47-53; Figs. 2-5). Kluth et al. further emphasize that "[m]asking layer 36 must be thick enough" for the above purposes, and "[p]referably, masking layer 36 has a thickness of about 500 to about 5,000 angstroms . . . in order to block the p-type dopants and the n-type dopants from the channel region 23" (column 5, lines 50-57).

Apparently, Kluth et al. is directed to form the masking layer for a rather different purpose, which requires the masking layer be in 10 to 100 times thicker than that of the protective layer recited in claim of the present invention. By consider circumstances as a whole,

Customer No.: 31561
Application No.: 10/065,750
Docket No.: 8711-US-PA

Kluth et al. not only failed to provide requisite suggestion or motivation of, but rather teach away from the recited limitation of forming the protective layer in a thickness of 50 angstroms.

It is clear that, because of the significant differences between the reference teachings and the claimed invention being considered as a whole, there is no requisite suggestion or motivation to modify Kluth et al. or to combine Kluth et al. with other cited references to bring the thickness of the protective layer within the range as recited in claim 1.

Thus, claim 1 is not rendered obvious over the prior art references. Consequently, claims 2-6, and 8-12, as dependent on claim 1, are also non-obvious over the prior art references as a matter of law.

Accordingly, Applicants respectfully submit that the grounds of rejection have been addressed and the rejection has been overcome. Reconsideration and withdrawal of the rejection are respectfully requested.

B. Allowable subject matter

The Office Action acknowledged that claims 13-21 are allowed.

Customer No.: 31561
Application No.: 10/065,750
Docket No.: 8711-US-PA

CONCLUSION

For at least the foregoing reasons, it is believed that the pending claims 1-6 and 8-21 are in proper condition for allowance. If the Examiner believes that a telephone conference would expedite the examination of the above-identified patent application, the Examiner is invited to call the undersigned.

Date :

Sept. 30, 2004

Jianq Chyun Intellectual Property Office
7th Floor-1, No. 100
Roosevelt Road, Section 2
Taipei, 100
Taiwan
Tel: 011-886-2-2369-2800
Fax: 011-886-2-2369-7233
Email: belinda@jicgroup.com.tw
Usa@jicgroup.com.tw

Respectfully submitted,

Belinda Lee
Belinda Lee

Registration No.: 46,863